Title (en)

An optical device and an optical lens

Title (de)

Optische Vorrichtung und optische Linse

Title (fr)

Dispositif optique et lentille optique

Publication

EP 1795863 A3 20070627 (EN)

Application

EP 06256198 A 20061205

Priority

- US 74253205 P 20051206
- US 58593106 A 20061025

Abstract (en)

[origin: EP1795863A2] A non-cylindrically surfaced lens converts a collimated light beam into a light plane that increases a light intensity toward distal portions of the light plane's arc so as to substantially uniformly project a reference light line onto a reference surface onto which the light plane is projected. The non-cylindrically surfaced lens has first and second surfaces that remain constant over at least a portion of the z direction length of the lens. The second surface defines a multiple-radius curve in an x,y plane. The lens may be incorporated into a self-leveled optical device that projects a reference light line onto a reference surface at a predetermined angle relative to horizontal.

IPC 8 full level

G01C 15/00 (2006.01)

CPC (source: EP US)

G01C 15/004 (2013.01 - EP US); **G02B 3/02** (2013.01 - EP US); Y10S 33/21 (2013.01 - EP US)

Citation (search report)

- [XA] US 2003231303 A1 20031218 - RASKIN JAMES R [US], et al
- [X] US 2004255477 A1 20041223 - LEVINE STEVEN R [US], et al
- [XA] US 2002178596 A1 20021205 - MALARD FABRICE J [US], et al
- [X] US 2004250432 A1 20041216 - KRANTZ NORMAN [US]
- [X] DE 4320177 A1 19941222 - LASER APPLIKATIONAN GMBH [DE]
- [A] EP 1508773 A2 20050223 - BLACK & DECKER INC [US]
- [X] US 3507565 A 19700421 - ALVAREZ LUIS W, et al

Cited by

DE202007015265U1; DE102016205089A1; EP2056067A3; US11047681B2; US7954248B2; EP2056067A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1795863 A2 20070613; **EP 1795863 A3 20070627**; **EP 1795863 B1 20200701**; CN 101038166 A 20070919; CN 101038166 B 20130306; JP 2007199680 A 20070809; JP 5032104 B2 20120926; TW 200739034 A 20071016; US 2007124947 A1 20070607; US 7520062 B2 20090421

DOCDB simple family (application)

EP 06256198 A 20061205; CN 200610164204 A 20061205; JP 2006327758 A 20061205; TW 95145163 A 20061205; US 58593106 A 20061025